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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,460	09/08/2003	Dean E. Draxton	APUS3	9793

7590 03/05/2004

J. Michael Neary  
Neary Law Office  
542 SW 298th Street  
Federal Way, WA 98023

EXAMINER
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GUADALUPE, YARITZA

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 03/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

14

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/657,460		DRAXTON ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Yaritza Guadalupe		2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on September 8, 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

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### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1 – 23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 - 23 of copending

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Application No. 10/020,106. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed subject matter as stated in claims 1 – 23 of the present application are disclosed in the claims of the copending application stated above.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Regarding claims 1 – 4 : Copending application 10/020,106 clearly discloses an acoustic pyrometer comprising means for generating an acoustic signal with a high amplitude sudden onset; means positioned adjacent said signal generating means for detecting the onset of said acoustic signal in said signal generating means and generating a first electrical signal corresponding in time to said onset of said acoustic signal in said signal generating means; means positioned across a space of known distance from said signal generating means for receiving acoustic signals from said space and for generating electrical signals corresponding to amplitude and frequency of said acoustic signals received in said receiving means', and means for processing said electrical signals from said receiver to distinguish the onset of said acoustic signal from background noise in said space as detected in said receiving means, and for comparing the time of said onset of said acoustic signal in said receiving means with said onset of said acoustic signal in said signal generating means to determine the transit time of said

Art Unit: 2859

acoustic signal to traverse said space, and for calculating said temperature of said gas in said space based on said transit time.

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With respect to claims 5 – 13 : Copending application 10/020,106 also discloses a method of measuring the average gas temperature along a line through an open space comprising the step of generating an acoustic signal with a high amplitude sudden onset; detecting said onset of said acoustic signal and generating a first electrical signal corresponding in time to said onset of said acoustic signal, propagating said acoustic signal across a space of known distance to a receiver, generating electrical signals in said receiver corresponding to amplitude and frequency of said acoustic signals received in said receiver, processing said electrical signals from said receiver to produce a distinct differentiation between background noise and said acoustic signal in said receiver; comparing the time of onset of said acoustic signal in said receiver with said onset of said acoustic signal in said signal generator to determine the transit time for said acoustic signal to traverse said space', and calculating said temperature of said gas in said space based on said transit time.

Regarding claims 14 – 16 : Copending application 10/020,106 also discloses an acoustic pyrometer for measuring the average temperature of gas along a path across a space of known distance, comprising an acoustic signal generator for generating an acoustic signal with a peak amplitude of at least about 170db and a rise time from zero to maximum amplitude of less than about 10 ms, a detector positioned adjacent said signal generator for detecting the onset of said acoustic signal in said signal generator and generating a first electrical signal corresponding in

Art Unit: 2859

time to said onset of said acoustic signal in said signal generator; a receiver positioned across said space from said signal generator for receiving acoustic signals from said space and for generating electrical signals corresponding to amplitude and frequency of said acoustic signals received in said receiver; and a signal processor for processing said electrical signals from said receiver to distinguish the onset of said acoustic signal from background noise in said space as detected in said receiver and for comparing the time of said onset of said acoustic signal in said receiver with said onset of said acoustic signal in said signal generator to determine the transit time of said acoustic signal to traverse said space, and for calculating said temperature of said gas in said space based on said transit time, said signal processor processing said electrical signals from said receiver to produce a distinct differentiation between background noise and the onset of said acoustic signal in said receiver.

With respect to claims 17 – 19 : Copending application 10/020,106 discloses an acoustic signal generator for generating an acoustic signal with a high amplitude onset, comprising a main cylinder having front and rear opposed ends and an axial opening in each end; a partition in an intermediate portion of said cylinder dividing said cylinder into front and rear chambers and an axial opening in said partition communicating between said chambers, a rear cylinder attached to said rear cylinder end around said rear axial opening and communicating therethrough with said rear chamber, a piston assembly having an intermediate piston in said rear chamber, and a rear piston in said rear cylinder', a seal assembly connected to said piston assembly and movable therewith, said seal assembly having a front plug and a front seal coacting with said front plug to seal said front end axial opening, and an intermediate seal plugging said axial opening in said

Art Unit: 2859

partition; said front seal is mounted on said front plug and is normally disposed on said front plug in a bore forming part of said front axial opening and is movable axially with said front

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plug; a pneumatic operating system for charging said rear chamber of said main cylinder with gas at a first high pressure and for charging said rear cylinder with gas at a second high pressure, said pneumatic operating system including a coupling for connection to a source of gas pressure and a remotely operated vent to allow said pressurized gas in said rear cylinder to escape, thereby reducing forwardly directed forces on said intermediate piston in said rear chamber exerted by pressurized gas on said rear piston, below rearwardly directed forces exerted by pressurized gas in said forward chamber against said intermediate seal.

With respect to claims 20 – 21 : Copending application teaches a method of generating an acoustic signal having a sharp, high amplitude onset, comprising the step of plugging an opening into a cavity within a body by positioning a plug in said opening, said opening communicating through said body between said cavity and external space outside said cavity, pressurizing gas in said cavity; accelerating said plug to high speed prior to unplugging said opening, and unplugging said opening by moving said valve at high speed from a fully plugged position to a fully unplugged position and releasing said pressurized gas suddenly from said cavity to said external space.

Regarding claim 22 : Copending application further discloses a process of determining the arrival time of an acoustic signal propagated through a noisy environment and detected in a receiver, comprising digitally pre-filtering said acoustic signals received in said receiver to



Art Unit: 2859

facilitate differentiation between background noise in said open space and said acoustic signal so as to locate the beginning of said acoustic signal in said background noise; said pre-filtering

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includes, a) measuring N consecutive samples of said signal received in id receiver, b) predicting what an N+ lth signal will be from the previous N samples, c) measuring said N+ lth sample to obtain an actual measured value of said N+ lth and d) subtracting said predicted N+ lth signal from said actual measured N+ lth signal value.

With respect to claim 23 : Copending application teaches a method of centering a fireball in a boiler furnace, comprising: separately actuating in rapid succession two signal generators placed in opposite sides of a fire box, and receiving signal produced by said signal generators in two receivers positioned opposite each other and on a plane transverse to a plane through both said signal generators', analyzing signals received in said receivers to detect non-uniform temperatures along sides of said firebox', adjusting the orientation of burners in said firebox to shift the fireball toward the center of the firebox.

### ***Conclusion***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yaritza Guadalupe whose telephone number is (571)272 -2244. The examiner can normally be reached on 9:00 AM - 6:30 PM.



Art Unit: 2859

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F.F. Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Yaritza Guadalupe  
Patent Examiner  
Art Unit 2859  
March 3, 2004

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